

REMARKS

The Office examined claims 1-20 and rejected claims 1-4, 7-14 and 17-20. With this paper, new claims 21 and 22 are added, claims 1 and 11 are changed to more distinctly claim the invention, and no other changes are made, so that the application now includes claims 1-22. Also, typographical errors (of omission, and failure to use proper punctuation) noticed for the first time in the disclosure at page 13 are corrected.

Changes to the claims

With this paper, claims 1 and 11 are changed to make recite that the decision to perform link adaptation is based on both the first and second indications of signal quality, so as to more correctly encompass the embodiments in which the second indication is the same kind of signal quality indication as the first--as recited in original claims 5 and 15--and so not actually "based on" the first. The invention as claimed now nevertheless still encompasses embodiments in which the second indication is "based on" the first.

New claims

New claims 21 and 22 are directed to an embodiment in which the decision to perform link adaptation is based on a succession of quality indicators associated with whether or not successive frames are correctly received. Support is at page 10, ll. 10-20.

Rejections under 35 USC §102

At paragraph three of the Office action, claims 1-3, 7-8, 10-13, 17-18 and 20 are rejected under 35 USC §102 as being anticipated by U.S. Pat. No. 6,215,827 to Balachandran

et al. In grounding the rejection, the Office action asserts that the Abstract of Balachandran teaches "deciding to perform link adaptation based on the second indication of the quality of the signal," which is recited in all of the claims of the application.

Applicant respectfully submits that nowhere does Balachandran even discuss link adaptation. As explained in the application at e.g. page 7, line 4, link adaptation is the process of changing baseband coding or the modulation level used in response to changing conditions affecting a communication channel. Balachandran merely discloses determining a metric (an average/ filtering of the metric used in implementing the Viterbi algorithm) for use in determining an SIR value (see e.g. the Summary of the Invention, at col. 2, ll. 39-50), which in turn can be used (as noted e.g. in the Abstract) for various purposes, including "mobile assisted handoff in a cellular system, power control and data rate adaptation in the transmitter." Thus, all that is disclosed in Balachandran is the prior art use of SIR for various purposes, including data rate adaptation, but using an allegedly novel method for determining a value for the SIR. There is no teaching of "providing a second indication ... " or (then) "deciding to perform link adaptation based on the second indication of the quality of the signal," but only based on a first (the SIR) indication of the quality of the signal, as in the prior art. (See e.g. Fig. 16 showing encoder and modulation decision unit 258 responsive only to SIR signal 274 in deciding on signals related to data rate adaptation.)

If the Examiner is asserting that in Balachandran the Viterbi metric is the first indication of the signal quality and the SIR to which the Viterbi metric is mapped is the second (since its value is based on the Viterbi metric),

applicant respectfully submits that the Viterbi metric is not provided, but is instead determined from the received signal, and so cannot be analogized to "the first indication of the quality of the signal." In other words, applicant submits that the Examiner is unfairly analogizing the received signal itself to "the first indication of the quality of the signal," whereas the specification makes clear that the indication of quality--such as e.g. a change in SIR target, or ACK/NACK signals, or indications that frames are correctly or incorrectly received--and the signal itself are distinct.

Since claims 1 and 11 as amended here both include as a limitation deciding (whether or not) to perform link adaptation based on a first and second indication of the quality of a signal, and since Balachandran never teaches or suggests such a limitation, applicant respectfully requests that all rejections under 35 USC §102 based on Balachandran be reconsidered and withdrawn.

Rejections under 35 USC §103

At paragraph 4 of the Office action, claims 4 and 14 are rejected under 35 USC §103 as being unpatentable over Balachandran in view of U.S. Pat. No. 6,639,934 to Engstrom et al.

The Office action justifies combining the teachings of Engstrom and Balachandran by asserting that "it would have been obvious to change the SIR target value as taught by Engstrom in the system of Balachandran in order to improve system flexibility." Applicant respectfully submits that what is claimed in claims 4 and 14 is not changing the SIR target, but instead, that "the decision to perform link adaptation is based on whether the SIR target is to be changed to a value that is within some predetermined margin

of a predetermined maximum or minimum SIR target." In other words, what is claimed is that the decision to perform link adaptation uses, as the second indication, whether the SIR target is to be changed (to a value ...). Applicant respectfully submits that Engstrom provides no such teaching.

Further, as noted, the Office action justifies combining the teachings of Engstrom and Balachandran by merely asserting that "it would have been obvious to change the SIR target value as taught by Engstrom in the system of Balachandran in order to improve system flexibility." Applicant respectfully submits that a *prima facie* case per MPEP at 706.02(j) for modifying the teaching of Balachandran as in the Office action has not been made. The showing required by MPEP at 706.02(j) in making a *prima facie* case is not that the modification would be useful in some respect, but instead that the (specific) modification is suggested or motivated by the prior art.

Accordingly, applicant respectfully requests that the rejections under 35 USC §103 of claims 4 and 14 be reconsidered and withdrawn.

At paragraph 5 of the Office action, claims 9 and 19 are rejected under 35 USC §103 as being unpatentable over Balachandran in view of U.S. Pat. No. 6,085,108 to Sebastian Knutsson et al.

Claims 9 and 19 depend from claims 1 and 11, believed allowable for the reasons given above.

Accordingly, applicant respectfully requests that the rejections of claims 9 and 19 under 35 USC §103 be reconsidered and withdrawn.

Conclusion

For all the foregoing reasons it is believed that all of the claims of the application are in condition for allowance and their passage to issue is earnestly solicited. Applicant's attorney urges the Examiner to call to discuss the present response if anything in the present response is unclear or unpersuasive.

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Date

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Respectfully submitted,



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